

CULTURAL CONSIDERATIONS IN ENVIRONMENTAL HEALTH AND TOXICOLOGY

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CULTURE

- DEFINITION- WEBSTERS NEW WORLD DICTIONARY
 - SOIL/PLANTS/BACTERIA
 - DEVELOPMENT, IMPROVEMENT, OR REFINEMENT OF THE MIND, EMOTIONS, INTERESTS, MANNERS, TASTES, ETC
 - 6TH DEFINITION IS THE IDEAS, CUSTOMS, SKILLS, ARTS, ETC OF A GIVEN PEOPLE IN A GIVEN PERIOD
 - GEOGRAPHIC/NATIONAL NATIVE AMERICAN, CHINESE, JAPANESE, EGYPTIAN, CHERNOBYL
 - RELIGIOUS
 - AGE- TEENAGERS, SENIOR CITIZENS, CHILDREN
 - WORK/OCCUPATION- COAL MINERS, FARMERS AND FAMILY
 - HEALTH STATUS- AUTISTIC CHILD & FAMILY, CYSTIC FIBROSIS AND ASTHMA, ALZHEIMERS, CVD
 - ETC

OUTLINE

- LESSONS LEARNED
- WHY IMPORTANT
 - UNIQUE EXPOSURES
 - DATA / SAMPLE COLLECTION
 - UNIQUE SUSCEPTIBILITIES
 - IMPLEMENTATION OF RECOMMENDATIONS
- SUMMARY

MOST IMPORTANT LESSON LEARNED

“ WE KNOW IT ALL & WE ARE THE PROFESSIONALS”

MICHIGAN – BITTER HARVEST, PBS SPECIAL 1980s similar to dioxins and PCBs

PBB FLAME RETARDANT MIXED INTO CATTLE FEED

STATE OF MICHIGAN ROLE AND ADVICE

100000+ CATTLE KILLED AND BURIED BY THE FARMERS and sent samples to WU & IDed.

EXAMINED 100 EXPOSED FARM FAMILIES WITH KIDS WHO WERE INUTERO DURING THE EXPOSURE

THE MOTHER’S ASKED; WHY STUDY THOSE KIDS WHEN IT WAS THE KIDS WHO WERE 2&3 YRS OLD WHO HAD THEIR HAIR FALLING OUT, RASHES, ETC ETC

COMMUNITY OF THE FARM CULTURE: KNEW SOMETHING WAS WRONG, IDed THE CONTAMINATE, KNEW WHAT THE CORRECT SAFETY APPROACH, KNEW WHO WAS MOST EFFECTED, AND HOW TO BEST STUDY

FREQUENTLY THE COMMUNITY/CULTURE HAVE CRITICAL INFORMATION AND IF NOT LISTENED TO CAN RESULT IN TRAGIC CONSEQUENCES FOR THE COMMUNITY AND THE PUBLIC AT LARGE

WHY IMPORTANT

- MUST ESTABLISH COLLEAGIAL TRUSTING AND RESPECTFUL RELATIONSHIP WITH ANY AND ALL COMMUNITIES YOU ARE WORKING WITH
 - TRUST
 - RESPECT THE COMMUNITY, ITS PRACTICES AND ITS STRENGTHS AND KNOWLEDGE
 - TO GATHER ALL THE IMPORTANT INFORMATION
 - THAT THE COLLEGIAL RECOMMENDATIONS ARE CARRIED OUT (PERSONAL AND COMMUNITY-WIDE)
 - ONGOING RELATIONSHIP SHOULD HELP ALL

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UNIQUE EXPOSURES

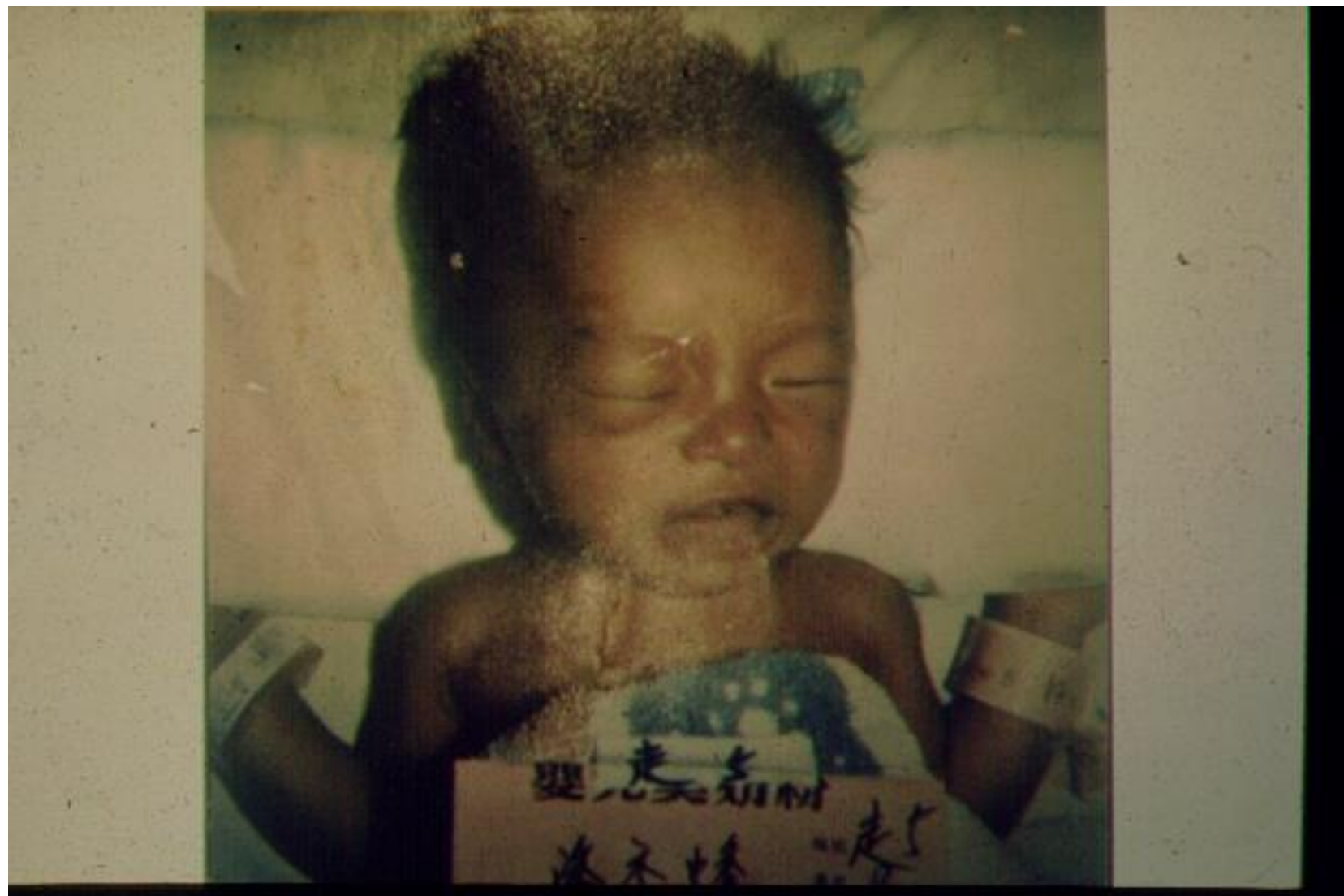
- MICHIGAN IN GENERAL AND CONTAMINATED FARMS- PBBs, also pesticides, etc
- YuCheng Chinese – PCDFs- severe birth defects and developmental delay
- Mexican and Central American- lead printed candy wrappers- pesticides and food products
- Chinese- lead painted toys and jewelry
- First Nation- PCBs from fish eating
- Old housing stock- lead – kids had lower developmental scores and increased criminality
- Teenagers- candied cigarettes and synthetic drugs
- Caribbean – Hg in selected religious practices and foods

Lead in Ethnic Products

- Mexican: azarcon, greta, liga, Maria Luisa, alarcon, coral, rueda
- Asian: chuifong, tokuwan, ghasard, bali goli, kandu, surma, ba-baw-san
- Middle Eastern: alkohl, saott, cebagin
- For more examples, see Appendix 1 of:
<http://www.cdc.gov/nceh/lead/CaseManagement>



Herbal Medicines- made everywhere including USA



UNIQUE SUSCEPTIBILITIES

- GENETIC- AUTISM/CF
- DISEASE STATE/GENETIC- CF, CF & ASTHMA, CVD,etc
- NUTRITION- FOLIC ACID DEFICIENCIES IN HISPANIC POPULATION DUE TO LOW SUPPLEMENTATION OF FOLIC ACID IN DIET- SP
- AGE- PCBs and PCDFs induced developmental delays in Michigan and YuCheng children, not adults

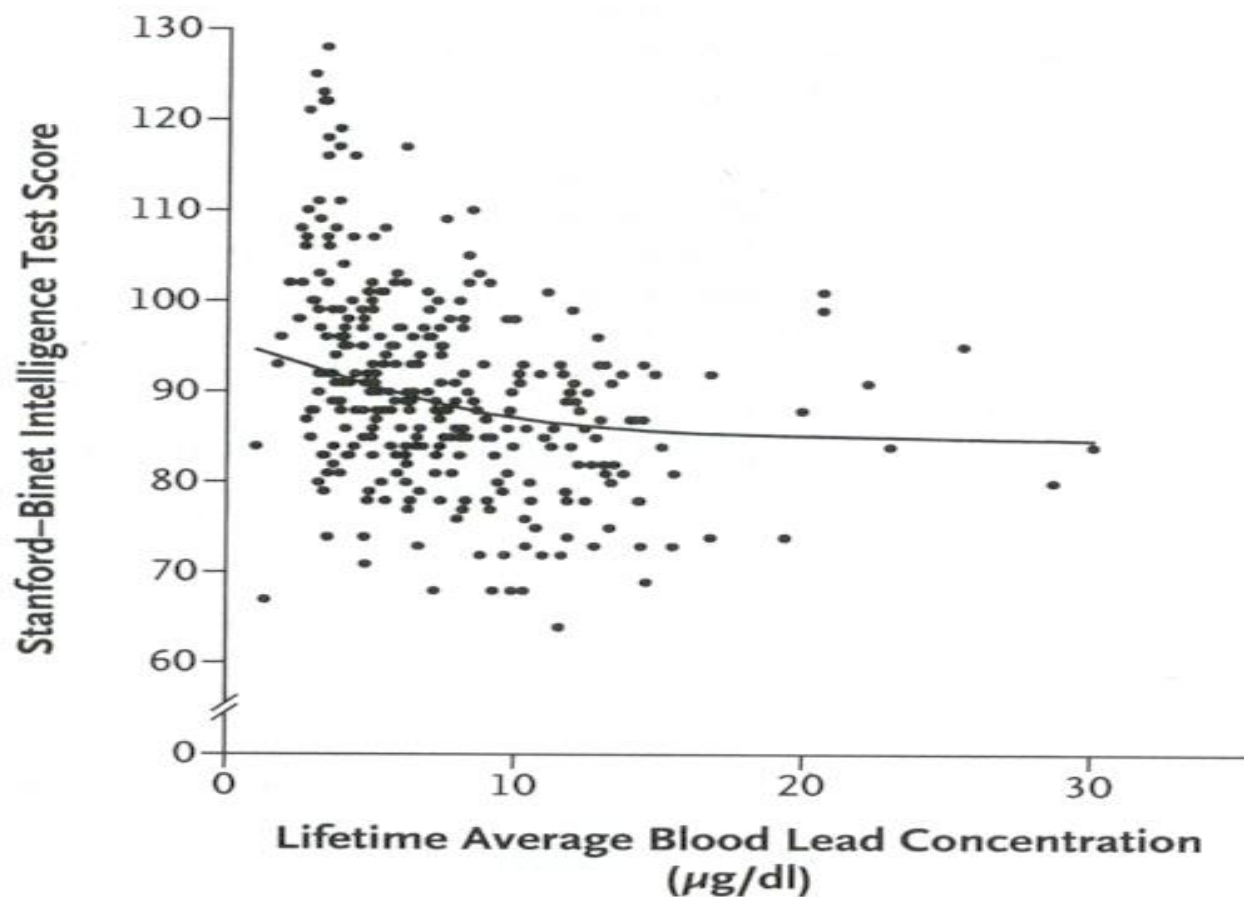


Figure 2. IQ as a Function of Lifetime Average Blood Lead Concentration.

IQ was assessed with use of the Stanford-Binet Intelligence Scale, fourth edition. The line represents the relation between IQ and lifetime average blood lead concentration estimated by the covariate-adjusted penalized-spline mixed model. Individual points are the unadjusted lifetime average blood lead and IQ values. To convert values for lead to micromoles per liter, multiply by 0.0483.

DATA AND SAMPLING, ENVIRONMENTAL AND BIOLOGIC

- NATIVE AMERICAN-

- TRIBAL LANDS

- POPULATION

CHINESE- YOUNG GIRLS

MICHIGAN BOYS- BLOOD A REAL ISSUE

GIRLS, WOULD NOT SPIT

COMMUNITY AS WHOLE KNEW US

AND WHAT WE WERE DOING

BEFORE WE MET THEM

ACCESS TO HOUSING OR WORKPLACE

IMPLEMENTATION OF RECOMMENDATIONS

- MUST HAVE TRUST BETWEEN THE PARTIES
- MUST UNDERSTAND THE RECOMMENDATIONS-
LANGUAGE BARRIERS
- CULTURAL BARRIERS - FISH EATING AND BREAST
FEEDING IN WHITES VS NATIVE AMERICANS
- AGE SPECIFIC BARRIERS- TEENAGERS
- ECONOMIC BARRIERS - SUBSISTANCE
FISHEATERS/CRABEATERS VS SPORTSMEN
- AVAILABLE GOVERNMENT ASSISTANCE - LEAD
ABATEMENT, NATIVE POPULATIONS,

SUMMARY

- CULTURAL DIFFERENCES AND BARRIERS MUST BE UNDERSTOOD AND RECOGNIZED TO BE TRUSTED, THOROUGH, AND **MOST EFFECTIVE**.

THESE INCLUDE HOW THE CULTURAL DIFFERENCES IMPACT MANY ISSUES INCLUDING BUT NOT EXCLUSIVELY ;

EXPOSURES

DATA / SAMPLE COLLECTION

SUSCEPTIBILITIES

AND IMPLEMENTATION OF
RECOMMENDATIONS

THANKS TO THE ORGANIZERS FOR THE
INVITATION TO ADDRESS YOU

AND

THANK YOU FOR YOUR ATTENTION

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